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ABSTRACT

Reviewed are educational philosophy and learning strategies for children who have learning disabilities in addition to deafness. Definitions, prevalence figures, etiological and educational theories, characteristics of and terminology for learning disabled (LD) children are discussed in terms of their relevance to the deaf learning disabled. A study of terminology and/or definition is noted to reveal a lack of uniformity and agreement in the learning disability and deaf fields, with some LD definitions excluding the deaf and others eliminating hearing handicaps when they are the primary cause(s) of a learning problem. The author supports a definition which focuses on an educationally significant discrepancy as appropriate for LD deaf students. Research findings on the deaf LD are cited, and the usefulness of task analysis and a more data-based approach to remediation are emphasized. (Author/SBH)

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Educational Planning for Deaf Children with Learning Disabilities

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Educational Planning for

Deaf Children with Learning Disabilities

The nature of learning disabilities and proposals for remediation have generated substantial confusion which threatens to hinder development of effective educational programs in this area. In the hope of providing some direction to educational planning, this paper will review literature from the fields of both learning disabilities and deaf education. Definitions, prevalence figures, etiological and educational theories, characteristics of and terminology for learning disabled children will be presented briefly, and discussed in terms of their relevance to deaf children who have learning disabilities.

A generally accepted definition of learning disabilities is not readily available. Although the term "learning disabilities" coined by Sam Kirk in 1962 (Mercer, 1976) has prevailed, it is not accepted by everyone in the field. There is not even agreement as to whether or not there should be any label at all (Ross, 1976; Haring & Bateman, 1977). Among those who have said there should be some label, arguments rage as to whether that label should be a behavioral description of students or should reflect etiology. Some of the more widely known definitions come from Kirk, Bateman, Barsch, the Association for Children with Learning Disabilities, and the National Advisory Committee on Handicapped Children of the U.S. Office of Education (Gearheart, 1973; Mercer, 1976; Haring & Bateman, 1977).

Most definitions actually exclude the deaf (Gearheart, 1973). Others, such as the NACHC definition, contain an exclusion section eliminating hearing handicaps when they are the primary cause(s) of a learning problem. A few definitions of learning disabilities do not exclude the hearing handicapped and can be applied well to this special deaf subgroup. One of Bateman's earlier definitions (1964) is especially useful:

> . . . one who manifests an educational significant discrepancy between his apparent capacity for language behavior and his actual level of language functioning (p.167).

The field of deaf education is also in a muddle regarding definition and terminology. Brill (1971) points to difficulties in determining incidence of deaf children with additional handicaps. He attributes these difficulties to lack of precise or uniform definitions used by those compiling statistics. Stewart (1971) expresses dissatisfaction with the term "multiply handicapped," describing it as a broad rubric encompassing such multiple handicaps as deafness/blindness, deafness/paraplegia, deafness/minimum brain dysfunction, and others. In his view these words tell merely that two or more handicaps are involved. He favors the term "low achieving deaf," but differentiates between students with emotional problems and learning disabilities. Lennan (1973) refers to children with "learning and/or emotional/behavioral problems" in describing a population in the Deaf Multi-handicapped Unit at the California School for the Deaf at Riverside. Jensema (1975) in a study on achievement test scores of multiply handicapped hearing impaired, lists

eleven subgroups of specific additional impairments. Three of those include "perceptual motor," "brain damage," and "learning disabilities."

Indications are that the multiply disabled deaf population in residential schools will increase (Schein, 1975; Lennan, 1974). Hagger (1972) cites estimates that at least 25% of all deaf children also have specific learning disabilities. Flathouse (1975) gives a 14% figure from a 1973 teacher survey in the Texas School for the Deaf.

All of these figures can be viewed relative to definition. Narrow and restrictive definitions leave out many individuals, while broader ones include a wide population.

A review of literature has yielded more than 40 terms applied to LD children (Cruickshank, 1972). One of the reasons for the terminological confusion and disagreement is that historically the field is related to the fields of mental retardation, brain injury, and emotional disturbance. Labels such as "minimal brain dysfunction" or neurological disorganization" or "brain injury" imply something about what caused the child to have whatever behavior he/she has.

From a study using a sample of 1,468 deaf children, Vernon (1969) concluded that a significant amount of behavioral variance among deaf children is not due to their hearing loss, but can be understood in terms of the etiology of their deafness. He holds that many of the secondary disabilities such as expressive and receptive communication disorders, mental deficiency, markedly atypical behavior, and learning disabilities are caused by brain damage that results from the same condition that led to the deafness. This runs counter to previous beliefs that many of the

learning and behavior problems are due only to deafness.

In addition to citing brain damage as a causal agent, many have attributed learning disabilities to such things as maturation lags, biochemical imbalance, lack of environmental stimulation, and emotional factors(see Haring & Bateman, 1977, Chapter 2 for a comprehensive review of key figures in the field and their theories of etiology).

Pronovost et al (1976) conducted a study involving 250 deaf children with "language, learning, and behavioral disabilities." Reports from their investigations include the following findings: (A) four fifths of the children had average or above average intelligence, and one fifth were in the dull normal or borderline categories; (B) a majority of the children revealed a language disorder unrelated to reduced hearing acuity per se; (C) very few were making good use of residual hearing through amplification. Conclusions of the research team focused on the need for highly flexible individualized programming, alternate educational prototypes, flexible scheduling, adequate services for parents, and an appropriate communication system with many pupils requiring a total communication approach.

An extensive curriculum project for young deaf children with learning disabilities was carried out by the New York State Education Department from 1966 to 1971. This study is known as the Cooperative Research Endeavors in Education of the Deaf, or Project CREED. Working in stages, project staff studied 12 educational programs including 193 deaf children (Rosenstein et al, 1967). They administered a battery of tests, and developed sequential levels of instruction in five areas: gross motor coordination, sensory motor integration, visual analysis, attention and memory, and

conceptualization. The primary goal of the project was indicated by the authors to be the development of cognitive processes (Restaino, 1971).

Bateman (1967) identifies three distinguishable approaches to teaching the learning disabled child: the etiological, the diagnostic remedial, and the task analytic. The lack of utility in focusing on the etiological approach for remediation purposes is stressed by several leaders in the LD field (Bateman, 1973; Ross, 1976). Bateman (1973) suggests a shift in focus from something deviant or pathological in the child to the arrangement of the environment by the teacher. She advocates establishing priorities and a finite number of behavioral objectives, analyzing the objectives into all component sub-objectives or sub-skills (teachable units), and then arranging the environment so that learning occurs. Her concept of a teaching model is:

> A more comprehensive teaching model includes presentation of concepts and skills (sometimes employing materials), response and practice opportunities (frequently employing materials), and reinforcement and/or correction procedures. The final step. . .is continuous assessment or monitoring of the child's progress toward each objective. . .No more than a few sessions should be spent using techniques or materials which are not successful. (p. 248)

Ross (1976) cautions with regard to the use of an etiological approach to remediation, that it can lead to assumptions of irreversibility in the child's condition. The efficacy of a more data-based approach to remediation is explained in two recent books on learning disabilities (Ross, 1976; Haring & Bateman, 1977).

Among the well known diagnostic-remedial approaches are programs which feature visual, visual perceptual, and visual-motor-perceptual training. Comprehensive reviews of research on these (Anderson, 1972; Keogh, 1974; Robinson, 1972; Vellutino, 1974) serve to caution educators about the relationship of these programs to improvement in such academic achievement areas as reading. The literature searches of Balow (1971) failed to locate any acceptable data that would lend support to any of the physical, motor, or perceptual programs used in prevention or correction of reading or other learning disabilities.

In a discussion of ability or process training, Ysseldyke & Salvia (1974) point out that the data on relationships between process and skill is only correlational, not causal. They criticize the diagnostic remedial approach for its use of mere hypothetical constructs.

Ross (1976) concludes from a review and analysis of research on learning and learning disabilities that these children have a developmental delay in sustaining selective attention. He explains that "the ability to attend selectively to the critical features of a stimulus and ignore the unessential aspects is an integral part of the learning process. . ." He elaborates on this as follows:

> We must do more than give the admonition, "Pay attention." We should be specific, and say "Attend to this, ignore that."(p.36).

Consistent with Ross' hypothesis on selective attention deficits are programs such as that described by Venezky (1975) which place emphasis on directing the learner's attention to relevant features of the task.

The task analytic approach teaches basic skills directly. The following

explanation serves to clarify this approach (Haring & Bateman, 1977):

> Task analysis is a detailed description of what a person does or should be doing to perform a task. . .Task analysis has four basic steps or components: (1) describing desired outcomes in behavioral terms, (2) naming skills and knowledge involved in the task, (3) naming, classifying and measuring the functions of each property named in the second step, and (4) development of the course of action (p.224).

(See Gagne, 1970 and Bijou, 1971) for a comprehensive review of task analysis and its application to the learning process).

Siegfried Engelman, who originated the task analytically derived DISTAR Language, Reading, and Arithmetic programs (materials carefully designed to teach basic skills to all children, including learning disabled) developed a teaching model known as the Direct Instruction Model. This model was selected as one of more than 20 used in a national study, the Follow Through Program, which compared diverse educational approaches. The academic success of its pupils has brought attention on a national level to the DISTAR program (see Haring & Bateman, 1977, Chapter 6). Fredericks et al (1972) cite DISTAR as an effective tool in the remediation of learning disabilities. At the Oregon State School for the Deaf, seven teachers, two with learning disabled deaf children in their classes, used either DISTAR materials or a DISTAR framework for their instruction during the 1976-77 school year (Guiles, 1977).

Behavior modification, defined as the "systematic application of experimentally derived learning principles to achieve measured change in measurable human behavior," (Webster, 1973) has been determined by researchers with deaf populations to be a promising alternative to traditional educational procedures (Webster, 1973; Craig, 1970; Lennan, 1973). In experiments

concerned with visual attending, Craig (1970) found evidence that immediate and tangible reinforcement, contingent on instructionally directed visual attending, can significantly increase attending for whole classes of deaf students. Stewart (1971) informs us that systematic teaching methods based on principles of behavior modification yield gratifying results with deaf children with learning disabilities.

Schein (1975), in discussing figures from projections of the deaf population through 1990, notes the probability that each year through 1980, we can expect 2,000 multiply handicapped deaf persons to reach age 19. It is the earnest hope of this writer that these individuals will not be denied the benefits of knowledge gained to date. Ideally, researchers using subject populations of deaf children with learning disabilities will undertake experiments that will have direct effect on instruction of these children by providing hard data on various training approaches, materials and methods.

In conclusion, this writer offers the following quote from Ross (1976) which seems in keeping with the theme of this year's convention "Think Basics":

> Too many methods currently used in the field of learning disabilities are taught as if they were eternal verities, but they are based on the untested hunches of a few "recognized" authorities, not on the results of research (p. 167).

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